



State Revolving Fund Loan Programs Drinking Water, Wastewater, Nonpoint Source

ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

CITY OF JEFFERSONVILLE MILL CREEK WASTEWATER TREATMENT PLANT EFFLUENT LINE/OUTFALL AND SPRING STREET PUMP STATION FORCE MAIN

STATE REVOLVING FUND PROJECT # WW06 12 10 05

DATE: January 26, 2011

TARGET PROJECT APPROVAL DATE: February 28, 2011

I. INTRODUCTION

The above entity has applied to the State Revolving Fund (SRF) Loan Program for a loan to finance all or part of the wastewater project described in the accompanying Environmental Assessment (EA). As part of facilities planning requirements, an environmental review has been completed which addresses the project's impacts on the natural and human environment. This review is summarized in the attached EA, which can also be viewed at <http://www.in.gov/ifa/srf/>.

II. PRELIMINARY FINDING OF NO SIGNIFICANT IMPACT (FNSI)

The SRF has evaluated all pertinent environmental information regarding the proposed project and determined that an Environmental Impact Statement is not necessary. Subject to responses received during the 30-day public comment period, and pursuant to Indiana Code 4-4-11, it is our preliminary finding that the construction and operation of the proposed facilities will result in no significant adverse environmental impact. In the absence of significant comments, the attached EA shall serve as the final environmental document.

III. COMMENTS

All interested parties may comment upon the EA/FNSI. Comments must be received at the address below by the deadline date above. Significant comments may prompt a reevaluation of the preliminary FNSI; if appropriate, a new FNSI will be issued for another 30-day public comment period. A final decision to proceed, or not to proceed, with the proposed project shall be effected by finalizing, or not finalizing, the FNSI as appropriate. Comments regarding this document should be sent within 30 days to:

Max Henschen
Senior Environmental Manager
State Revolving Fund -- IGCN 1275
100 N. Senate Ave.
Indianapolis, IN 46204
317-232-8623; mhensche at ifa.in.gov

ENVIRONMENTAL ASSESSMENT

I. PROJECT IDENTIFICATION

Project Name and Address: **Mill Creek Wastewater Treatment Plant (WWTP)
Effluent Line/Outfall and Spring Street Pump
Station Force Main**
City of Jeffersonville
Jeffersonville City Hall
500 Quartermaster Court
Jeffersonville, IN 47130

SRF Project Number: WW06 12 10 05

Authorized Representative: The Honorable Thomas R. Galligan, Mayor

II. PROJECT LOCATION

Jeffersonville is in Clark County across the Ohio River from Louisville, Kentucky. The project area is located near the central area of the city along Pennsylvania Avenue, an abandoned railroad corridor and Willinger Lane, between the Downtown wastewater treatment plant (DWWTP) and Mill Creek. The project area is in the Jeffersonville, IN-KY USGS quadrangle in Survey 8 of the Illinois Grant for Clark County in Jeffersonville Civil Township.

III. PROJECT NEED AND PURPOSE

The city owns and operates a sanitary sewer system, storm water system, and combined sewer system (i.e., sewers which carry both storm water and sanitary wastewater). The Combined Sewer Service Area is approximately 15 percent of the city's current service area, while the remaining 85 percent is a Sanitary Sewer Service Area comprised of sanitary sewers and storm sewers.

The combined sewers were constructed in the early 1900s, expanded in the 1930s and are located in the old downtown area. Sanitary sewers were not constructed until after 1950. The combined sewers range in size from 12- to 96-inches in diameter and are comprised of brick, vitrified clay pipe and reinforced concrete pipe (RCP). There are three major lift stations (Tenth Street Pump Station, Spring Street Pump Station [SSPS], and Mill Creek Pump Station) and 48 minor or secondary pumping stations. In addition, wastewater from one industrial facility (Kruncher's) is pumped directly to the DWWTP following primary treatment.

The city entered into a Consent Decree with the U.S. EPA and the Indiana Department of Environmental Management (IDEM), effective on November 24, 2009, which specifies the methods and time frames which the city must follow in order to reduce or eliminate combined sewer overflows (CSOs) to the Ohio River

The city's Combined Sewer Overflow Long Term Control Plan (CSO LTCP) identifies several projects that will enable the collection system to route more wet weather flows to an upgraded DWWTP.

One of these projects proposes the construction of a North WWTP; to serve the River Ridge Commerce Center (RRCC) and other areas north of the city. The city is currently preparing a Preliminary Engineering Report describing that project. Flows generated from these areas are currently being treated by the DWWTP; they will be diverted to the North WWTP when it goes on-line, creating capacity at the DWWTP for treating wet weather flows during heavy rains.

The DWWTP will be expanded in the near future to treat a maximum wet weather capacity of 50 million gallons per day (MGD). USEPA has indicated that this treatment capacity should be attained prior to a CSO discharge from CSO 018 at the Tenth Street Pump Station.

The city determined that the existing effluent line from the DWWTP does not have enough capacity to accommodate flows from an expanded DWWTP, so the city is proposing a new 72-inch effluent line. Based on a present worth analysis, the city determined that an effluent outfall to Mill Creek would be cost-effective compared with an effluent outfall to the current receiving stream of Cane Run. At the same time as construction of the new effluent line, a new 24-inch force main to the SSPS would be installed in the same trench as the new effluent line from the DWWTP to Spring Street. The remainder of the force main from Spring Street to the SSPS will be installed at a later date when the SSPS is upgraded. In addition, due to its location in the proposed effluent line and force main routes, approximately 228 feet of 36-inch storm sewer will be relocated to the same trench as the effluent line and force main.

IV. PROJECT DESCRIPTION

The proposed Mill Creek effluent line and the SSPS force main include (see Figure 1):

- A. installing approximately 4,000 feet of 72-inch RCP;
- B. installing approximately 37 feet of concrete encasement for a 24-inch pipe;
- C. installing approximately 37 feet of concrete encasement for a 72-inch pipe;
- D. installing approximately nine manholes;
- E. installing a 72-inch headwall;
- F. installing approximately 2,763 feet of 24-inch polyvinyl chloride (PVC) force main;
- G. installing approximately two air and vacuum valves and vaults;
- H. replacing approximately 355 square yards of pavement for a 20 foot trench;
- I. constructing one stream crossing;
- J. installing a temporary flow diversion (bypass pumping system) in Mill Creek;
- K. relocating one overhead utility;
- L. performing miscellaneous construction work at Kruncher's;
- M. relocating approximately 228 feet of 36-inch RCP storm sewer;

- N. installing approximately four catch basins; and
- O. relocating approximately 231 feet of 6-inch force main at Kruncher's.

V. ESTIMATED PROJECT COST AND FUNDING

A. Selected Plan Estimated Cost Summary

<u>Construction Components</u>	<u>Costs</u>
72-inch RCP effluent line	\$ 2,600,000
Concrete Encasement (24" Pipe)	7,400
Concrete Encasement (72" Pipe)	18,500
Manholes	100,000
72-inch headwall	10,000
24-inch force main for SSPS	483,525
Air and Vacuum Valves & Vaults	16,000
Junction Box	37,055
16 ft. by 3 ft. reinforced concrete box	200,000
Dewatering	300,000
Clearing and grubbing	100,000
Traffic Control	50,000
Erosion Control	26,988
Construction Fence	5,780
Pavement Replacement	14,200
Utility Crossings	25,000
Stream Crossing	50,000
Flow Diversion/Bypass System	25,000
Temporary Security Fence	4,000
Overhead Utility Relocation	20,000
Misc. Construction @ Kruncher's	25,000
Existing Utility Coordination	10,000
Relocating 6-inch FM from Kruncher's	10,395
Relocating 36-inch RCP storm sewer	17,100
Catch Basins	14,000
Mobilization and Demobilization	100,000
Subtotal Estimated Construction Cost	\$ 4,269,943
Contingencies	426,994
Total Estimated Construction Cost	\$ 4,696,937
 Non-Construction Costs*	 480,000
Land Acquisition **	100,000
Total Estimated Project Cost	\$ 5,276,937

* includes administrative, legal, engineering & inspection costs

** land acquisition is not eligible for SRF reimbursement

- B. The city will borrow approximately \$5,176,937 through a 20-year State Revolving Fund Loan Program (SRF) loan at an interest rate to be determined at loan closing. The remaining \$100,000 will be paid with local funds. Monthly user rates and charges may need to be analyzed to determine if adjustments are required for loan repayment.

VI. EVALUATION OF ALTERNATIVES

Several alternatives were evaluated including the “No Action” alternative.

A. “No Action” Alternative

This alternative was rejected since the existing effluent line does not have enough capacity to discharge all of the treated wet weather flows from the soon-to-be-expanded DWWTP.

B. Construct New Effluent Pumping Station and Effluent Force Main

This alternative would allow the DWWTP to discharge its effluent to Mill Creek and would consist of an effluent pumping station and force main to accommodate the peak wet weather flow of 50 MGD. This alternative was dismissed due to high operating and maintenance costs.

C. Parallel Cane Run Effluent Line

This alternative would allow the DWWTP to discharge its treated effluent through another gravity effluent line that would discharge to Cane Run and ultimately to the Ohio River. This alternative was rejected due to cost, since the parallel effluent line would require tunneling under Interstate 65 and a railroad.

D. Construct New Effluent Line as a Gravity Sewer to Mill Creek

This alternative involves the construction of a new 72-inch gravity effluent line from the DWWTP to Mill Creek that will handle a peak wet weather capacity of 50 MGD.

In addition, in the same alignment as the proposed 72-inch force main, the city will install a new 24-inch force main to Spring Street to eventually serve the SSPS, as well as approximately 228 feet of 36-inch storm sewer. Based on a cost-effectiveness analysis, this was the selected alternative.

VII. ENVIRONMENTAL IMPACTS OF THE FEASIBLE ALTERNATIVES

A. Direct Impacts

Undisturbed Land: Construction will occur within rights-of-way and easements in previously disturbed areas.

The new effluent line will begin at the DWWTP’s effluent flow chamber and extend to the west toward Pennsylvania Avenue, where it will proceed north along the street right-of-way and an abandoned railroad corridor to the Kruncher’s site, then continue north along the abandoned railroad corridor in a 60-foot wide easement across Hamburg Pike, and then along an easement

parallel to Willinger Lane to its discharge at Mill Creek. The new 24-inch force main for the SSPS would begin at Spring Street where the new Mill Creek effluent line crosses the existing 12- and 18-inch force mains, and then extend south parallel to the new Mill Creek effluent line along Pennsylvania Avenue to a point near the DWWTP where it will connect to an existing 30-inch force main. The 36-inch storm sewer will be installed near the Kruncher's manufacturing facility.

Historic Structures (Figure 2): Construction and operation of the project will not alter, demolish or remove historic properties. If any visual or audible impacts to historic properties occur, they will be temporary and will not alter the characteristics that qualify such properties for inclusion in or eligibility for the National Register of Historic Places. The SRF's finding pursuant to Section 106 of the Historic Preservation Act is: "no historic properties affected."

Wetlands (Figure 3 and 4): Mill Creek is a riverine wetland. The city has obtained a wetland permit from the U.S. Army Corps of Engineers and the IDEM wetland permit is in process.

Stream Crossings (Figure 4): One open-cut ditch crossing approximately 30 feet wide at a tributary to Mill Creek will be necessary. The outfall pipe at Mill Creek will be installed by open cut.

100-Year Floodplain (Figure 5): The proposed project will not affect the 100-year floodplain.

Plants and Animals: The city will clear a 60-foot wide corridor to accommodate the effluent line, Spring Street Pump Station force main and relocated storm sewer along the abandoned railroad corridor, which has been overgrown with trees. The wooded area begins on the north side of the Kruncher's parking lot and continues north to the crossing at Hamburg Pike.

Groundwater: Dewatering will likely be required for this project. The dewatering will have only minimal effects due to the short duration of construction. As part of this project, the city will obtain a Rule 5 Erosion Control Permit.

Prime Farmland: The project will not affect prime/unique farmland.

Air Quality: Air quality will be temporarily affected by construction activities, including vehicle exhaust and dust.

Open Space and Recreational Opportunities: The proposed project will neither create nor destroy open space and recreational opportunities.

The proposed project will not affect National Natural Landmarks.

B. Indirect Impacts

The city's Preliminary Engineering Report (PER) states: *The City through the authority of the sewer board, or planning commission will ensure the future development, as well as future collection system or treatment works projects connecting to SRF funded facilities, will not adversely impact wetlands, archaeological/historic/structural resources, or other sensitive environmental resources. The City will require new development and treatment works projects to be constructed within the guidelines of the U.S. Fish and Wildlife Service, IDNR, Indiana Department of Environmental Management (IDEM) and other environmental review authorities.*

C. Comments from Environmental Review Authorities

The Natural Resources Conservation Service, in correspondence dated May 13, 2010, noted that the project will not cause a conversion of prime farmland.

The U.S. Fish and Wildlife Service, in correspondence dated December 21, 2010, stated:

...the city of Jeffersonville proposes to install a new wastewater effluent line and parallel force main, with a new outfall to Mill Creek. The new sewer lines would be approximately 4000 feet long, following Pennsylvania Street, an abandoned railroad corridor and Willinger Lane. The project would require the removal of approximately 1.8 acres of woody vegetation along the railroad corridor, with an open-trench crossing of a small Mill Creek tributary. The National Wetland Inventory maps show a forested wetland along the tributary stream downstream (east) of the proposed sewer line crossing, however your letter states that the wetland would not be affected by the project.

The Mill Creek corridor has a forested buffer on both sides totaling over 100 feet wide through most of the project area, however some short stream reaches on the south side area are devoid of riparian forest. This riparian corridor provides important habitat for migratory birds and also provides a water quality buffer, shade and structural aquatic habitat. The railroad corridor and tributary stream have narrower wooded corridors. We recommend the following mitigation measures to minimize impacts on wildlife.

1. Install the effluent line outfall at a location that will require the least riparian tree removal.
2. Minimize erosion and cover or contain soil piles to prevent run off to streams during construction. Stabilize disturbed stream banks as quickly as possible after construction is completed. Revegetate with native plant species in riparian areas.
3. Construct the excavated crossing of the tributary stream during a dry or low-water period.
4. Mitigate for forest loss by enhancing the Mill Creek riparian buffer wherever possible.

The proposed project is within the range of the federally endangered Indiana bat (*Myotis sodalis*) and gray bat (*M. grisescens*). Indiana bats hibernate in caves, then disperse to reproduce and forage in relatively undisturbed forested areas associate with water resources during spring and summer. Recent research has shown that they will inhabit fragmented landscapes with adequate forest for roosting and foraging. Young are raised in nursery colony roosts in trees, typically near forested drainageways in undeveloped areas.

Gray bats inhabit caves year-around, typically migrating between winter hibernation caves and summer cave roosts used for reproduction and foraging. Their preferred foraging habitat is typically wooded stream corridors and their forage base often includes a high percentage of aquatic insects. The gray bat's core range is in the southern U.S. and there is only one significant summer maternity colony known in Indiana, in southern Clark County. Previous studies have shown that Silver Creek and Muddy Fork are the main foraging habitat for this colony but it is known to use other streams as well.

There is limited suitable summer habitat for Indiana bats and foraging habitat for gray bats in the area surrounding the project site, in forested stream corridors, railroad corridors, wetlands and woodlots. There are current records of both species in Clark County but not near the project site. The project will not eliminate enough habitat to affect either species, but to avoid incidental take of Indiana bats from removal of an occupied roost tree we recommend that tree-clearing be avoided at Mill Creek during the period April 1 through September 30. If this measure is implemented we concur that the proposed project is not likely to adversely affect this listed species.

This precludes the need for further consultation on this project as required under Section 7 of the Endangered Species Act of 1973, as amended. If project plans change significantly, please contact our office for further consultation.

The IDNR Division of Historic Preservation and Archaeology (DHPA), in correspondence dated January 6, 2011, stated:

Based on our analysis,, it has been determined that no historic properties will be altered, demolished or removed by the proposed project provided that all project activities remain within areas disturbed by previous construction.

If any archaeological artifacts, features, or human remains are uncovered during construction, state law (Indiana code 14-21-1-27 & 29) requires that the discovery must be reported to the Department of Natural Resources within two (2) business days.

The Natural Resources Conservation Service, in correspondence dated May 13, 2010, stated:

The project...will not cause a conversion of prime farmland.

The IDNR Environmental Unit, in correspondence dated January 14, 2011, stated:

The Indiana Department of Natural Resources has reviewed the above referenced project per your request. Our agency offers the following comments for your information and in accordance with the National Environmental Policy Act of 1969.

Regulatory Assessment: This proposal will require the formal approval for construction in a floodway under the Flood Control Act, IC 14-28-1, unless it qualifies for a general license under Administrative Rule 312 IAC 10-5 that applies to utility line crossings (see enclosure). Please include a copy of this letter with the permit application if the project does not meet the general license criteria.

Natural Heritage Database: The Natural Heritage Program's data have been checked.

To date, no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity.

Fish & Wildlife Comments: Impacts to non-wetland forest under 1 acre should be mitigated by planting five trees, 1 inch to 2 inches in diameter-at-breast height, for each tree which is removed that is ten inches or greater in diameter-at-breast height. Impacts to non-wetland forest over 1 acre should be mitigated at a minimum 2:1 ratio. For more information, see [Http://www.in.gov/legislative/register/20061213-IR-312060562NRA.xml.pdf](http://www.in.gov/legislative/register/20061213-IR-312060562NRA.xml.pdf).

Impacts to wetlands should be mitigated at the appropriate ratio as well according to the above website. Due to the presence or potential presence of wetlands on site, we recommend contacting and coordinating with the Indiana Department of Environmental Management (IDEM) 401 program and also the US Army Corps of Engineers (USACE) 404 program.

We recommend that all creek or stream crossings be done using the directional bore method. Should the directional bore method not be feasible at any of the planned stream crossings due to the site conditions and the open-trench method is necessary, then the following measures should be implemented:

- 1) Any open-trench stream crossing should be timed to coincide with the low-water time of year (typically mid- to late-summer).
- 2) Restore disturbed streambanks using bioengineering bank stabilization methods and revegetate disturbed banks with native trees, shrubs and herbaceous plants. Stream bank slopes after project completion should be restored to stable-slope steepness (not steeper than 2:1).
- 3) The cleared width through any forested area should be the minimum needed to install the line and no wider than 20 feet wide through the forested area to allow the canopy to close over the line.

- 4) Use graded stone or riprap to protect the section of trench below the normal water level from scour or erosion (any stone or riprap fill in the streambed must remain at the existing streambed level to avoid creating a fish passage obstruction).

Fish, wildlife, and botanical resource losses as a result of this project can be minimized through implementation of the following measures.

Revegetate all bare and disturbed areas with a mixture of grasses (excluding all varieties of tall fescue), legumes, and native shrub and hardwood tree species as soon as possible upon completion.

Minimize and contain within the project limits inchannel disturbance and the clearing of trees and brush.

Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and Wildlife.

Do not cut any trees suitable for Indiana bat roosting (greater than 3 inches dbh [*diameter at breast height*], living or dead, with loose hanging bark) from April 1 through September 30.

Plant native hardwood trees along the top of the bank and right-of-way to replace the vegetation destroyed during construction.

Post "Do Not Mow or Spray" signs along the right-of-way.

Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the stream or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.

Seed and protect disturbed stream banks and slopes that are 3:1 or steeper with biodegradable heavy-duty erosion control blankets (follow manufacturer's recommendation for installation); seed and apply mulch on all other disturbed areas.

VIII. MITIGATION MEASURES

The city's PER states:

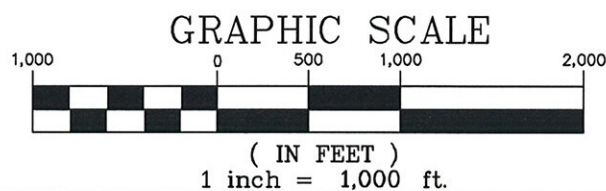
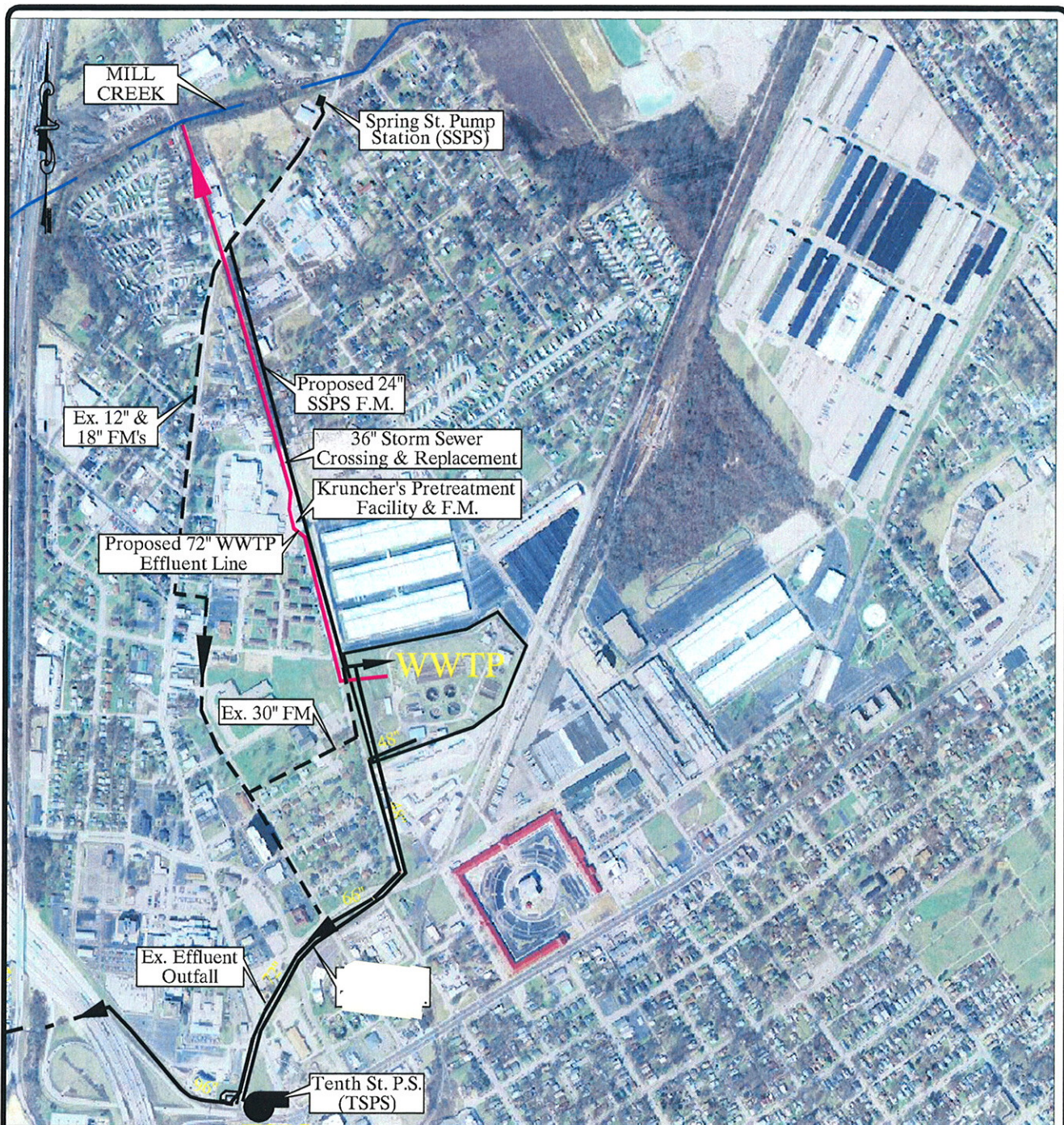
Erosion control and siltation measures include the following:

1. *The contractor will be required to install silt fence along all ditches, creeks, or top of banks. All disturbed areas must be covered with seed and straw as soon as practical, but no longer than 14 days.*
2. *Natural vegetation will be retained wherever possible.*

3. *Excavations will be limited to rights-of-way and easements.*
4. *Appropriate best management practices, such as silt fence, seeding, and mulching, will be implemented wherever possible to control runoff throughout the project.*
5. *All surface drainage, including ditches and creeks, will be returned to their pre-construction state as soon as feasible.*
6. *Roadways and driveways will remain stabilized during construction as much as possible.*
7. *When possible, construction activities will be scheduled to avoid excessively wet conditions.*
8. *No more than 100 feet of open trench will be allowed, where feasible. Where possible, excavated materials will be used elsewhere on the project, or removed from the site.*
9. *The existing topsoil will be reused during the restoration where possible.*
10. *The adverse impacts caused by dust may be alleviated by periodically wetting the exposed soil and unpaved roadways. To reduce noise impacts, construction will be limited to daytime hours.*

IX. PUBLIC PARTICIPATION

A properly publicized public hearing was held at 7:30 p.m. on Tuesday March 24, 2009, in the Mayor's Conference Room in City Hall. Members of the public did not attend.



REVISED 09/22/10
REVISED 11/11/10
REVISED 01/18/11

City of Jeffersonville, Indiana
MILL CREEK WWTP EFFLUENT OUTFALL PER
EXISTING & PROPOSED WWTP OUTFALL

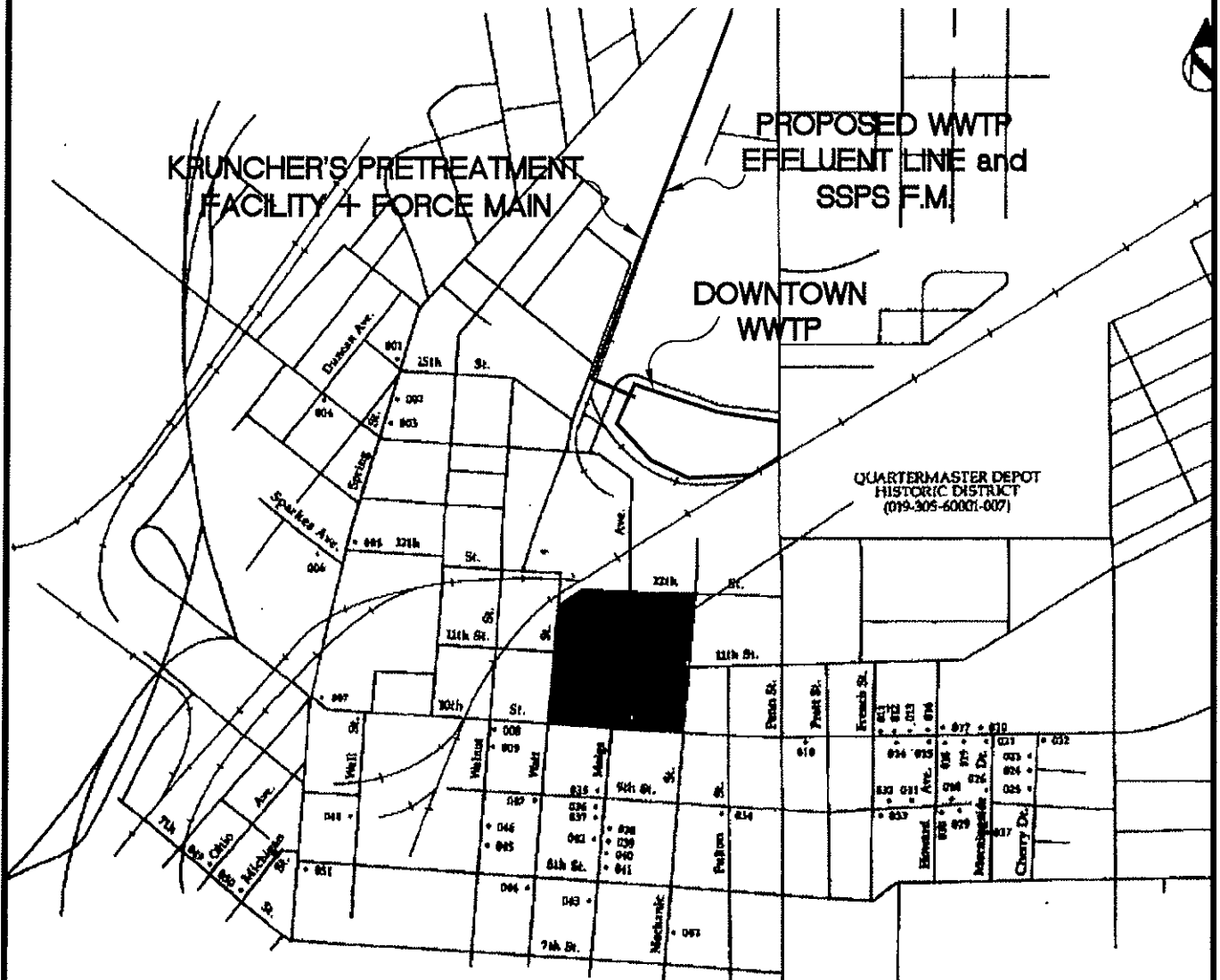
FIGURE

1



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Consulting Engineers

Jeffersonville Scattered Sites



NO SCALE

REVISED 09/22/10
REVISED 11/11/10

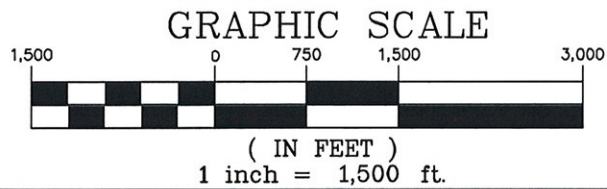
City of Jeffersonville, Indiana
MILL CREEK WWTP EFFLUENT OUTFALL PER
CLARK COUNTY INTERIM REPORT
HISTORICAL SITES MAP

FIGURE

2



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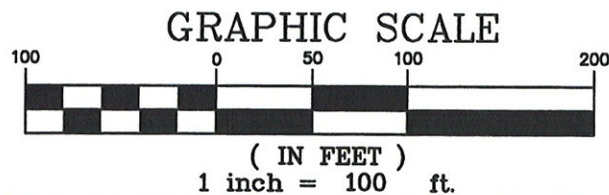
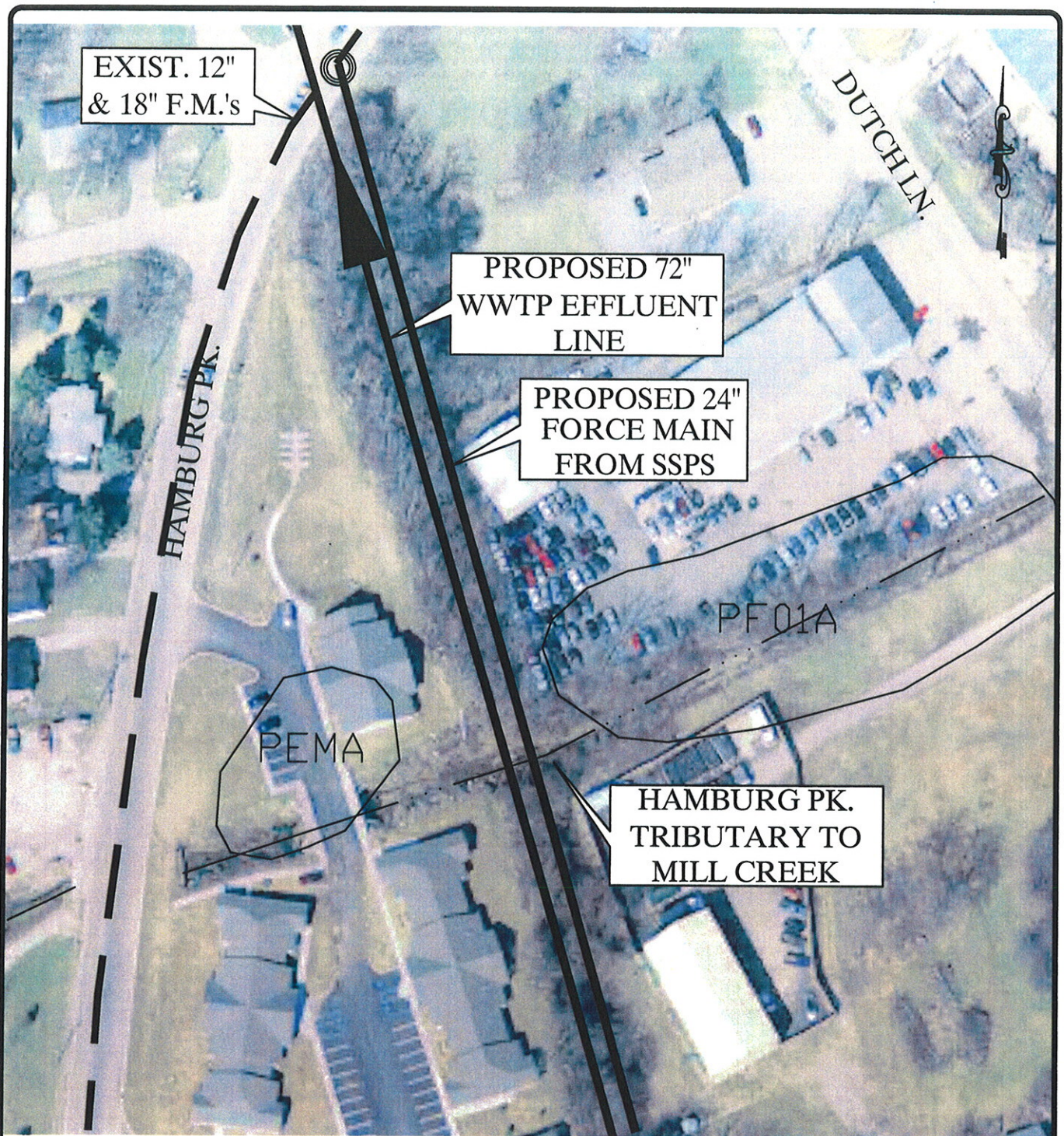
City of Jeffersonville, Indiana
MILL CREEK WWTP EFFLUENT OUTFALL PER
NATIONAL WETLANDS INVENTORY MAP

FIGURE

3



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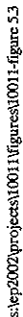
City of Jeffersonville, Indiana
MILL CREEK WWTP EFFLUENT OUTFALL PER
HAMBURG PIKE TRIBUTARY CROSSING

FIGURE

4



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